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10/762,945	01/22/2004	Dianne Ellis	02-299	5980
62753 7590 05/08/2009 VALERIE CALLOWAY CHIEF INTELLECTUAL PROPERTY COUNSEL POLYMER GROUP, INC. 9335 HARRIS CORNERS PARKWAY SUITE 300 CHARLOTTE, NC 28269				
EXAMINER				
CHOL PETER Y				
ART UNIT		PAPER NUMBER		
1794				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/762,945

Applicant(s)

ELLIS ET AL.

Examiner

PETER Y. CHOI

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4-6, 9-12 and 14-24 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-6, 10-12 and 15-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicants' election with traverse of Group II, in the reply filed on February 25, 2009, is acknowledged. The traversal is on the ground(s) that there would be no serious burden on Examiner if election is not required. This is not found persuasive because the current Examiner did not conduct the search on the previously presented claims. Additionally, as set forth in the Restriction Requirement of February 13, 2009, the species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph. Claims 9 and 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 2, 4-6, 10-12 and 15-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it

pertains, or with which it is most nearly connected, to make and/or use the invention. A number of factors must be considered in assessing the enablement of an invention, including the following: the breadth of the claims, the amount of experimentation necessary, the guidance provided in the specification, working examples provided, predictability, and the state of the art. See *In re Wands*, 858 F.2d 731, 8 USPQ2d 1400 (Fed. Cir. 1988).

Regarding claims 1, 2, 4-6, 10-12 and 15-24, claims 1, 4, 12, and 17 recite an anionic dual quaternary ammonia anti-microbial agent. Ammonia and ammonium differ in that ammonia is a neutrally charged NH_3 compound, and ammonium is a positively charged NH_4^+ compound. Therefore, dual quaternary ammonia structures would necessarily entail that the anti-microbial agent is neutrally charged. However, it is unclear what structure is associated with an anionic dual quaternary ammonia anti-microbial agent, as such a structure appears to be incapable of being anionic.

Additionally, it is unclear what structure is associated with an anionic dual quaternary ammonia anti-microbial agent, as such a structure does not appear to be known in the art; only dual quaternary ammonium anti-microbial agents are known, in which the quaternary-based anti-microbial agents comprise a positive charge, due to the presence of an ammonium cation and a corresponding anion, which aids in penetrating the gram negative cell wall of gram negative organisms. Since Applicants do not disclose known dual quaternary ammonia anti-microbial agents which are within the scope of the claimed anti-microbial agents or methods of forming such dual quaternary ammonia agents such that they are anti-microbial, one of ordinary skill in the art would be required to develop a process to form a dual quaternary ammonia agent, then be required to determine if the formed agent is additionally anti-microbial, and therefore within the

scope of the claimed invention. Therefore, the claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 2, 4-6, 10-12 and 15-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 2, 4-6, 10-12 and 15-24, claims 1, 4, 12, and 17 recite a dual quaternary ammonia anti-microbial agent. However, it is unclear what anti-microbial agent is within the scope of a dual quaternary ammonia anti-microbial agent, as such an anti-microbial agent does not appear to be generally known in the art and Applicants do not disclose known dual quaternary ammonia anti-microbial agents which are within the scope of the claimed anti-microbial agents. Additionally, it is unclear how a dual quaternary ammonia anti-microbial agent can be an anionic anti-microbial agent, since an anionic anti-microbial agent has a negative charge, and a dual quaternary ammonia agent is necessarily neutral in charge, due to the presence of the ammonia component.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 4-6, 12, 17, 20 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,929,498 to Suskind in view of USPN 6,015,836 to Martin.

Regarding claims 1, 2 and 6, Suskind teaches a nonwoven anti-microbial wipe comprising a fibrous nonwoven substrate impregnated with an anionic binder and an anionic anti-microbial agent, wherein the anionic anti-microbial agent is a quaternary ammonium anti-microbial agent (see entire document including column 1 line 6 to column 5 line 37). As set forth above, it is unclear what the scope of an anionic quaternary ammonia anti-microbial agent necessarily entails.

Regarding claims 1, 2 and 6, the prior art does not appear to teach that the anionic anti-microbial agent is a dual quaternary ammonia anti-microbial agent. However, Martin teaches that it was known in the wipe art to form a wipe comprising a disinfection solution, wherein the disinfection solution contains a dual quaternary ammonium compound (Martin, column 1 line 13 to column 2 line 10, column 2 line 46 to column 4 line 45). Martin teaches that dual quaternary ammonium compounds are improvements over quaternary ammonium compounds, since quaternary ammonium compounds are not inhibitory to tuberculoïdal or sporicidal organisms. Martin teaches that the dual quaternary ammonium compound of Martin has improved efficacy, reduced toxicity, an increased spectrum of anti-microbial effectiveness, and gives a faster biocidal kill, is non-sensitizing, less irritating and is non-staining.

When a work is available in one field, design incentives and other market forces can prompt variations of it, either in the same field or in another. If a person of ordinary skill in the

art can implement a predictable variation, and would see the benefit of doing so, §103 likely bars its patentability. Moreover, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill.

One of ordinary skill in the art at the time the invention was made, when viewing the state of the art and the predictable improvements in structures known in the art, would be motivated to improve the anti-microbial wipe of the prior art, with the anti-microbial taught by Martin, since the improvements of Martin were known to one of ordinary skill in the art and it would have predictably improved similar articles in the same way. In the present case, it would have been obvious to one of ordinary skill in the wipe art at the time the invention was made to form the wipe of the prior art, wherein the anti-microbial agent is a dual quaternary ammonium anti-microbial agent, as taught by Martin, motivated by the desire of forming a conventional wipe with an improved anti-microbial agent known in the wipe art as predictably having improved efficacy, reduced toxicity, an increased spectrum of anti-microbial effectiveness, and gives a faster biocidal kill, is non-sensitizing, less irritating and is non-staining.

Regarding claims 1, 2 and 6, although the prior art does not appear to specifically teach that the anionic anti-microbial agent is readily releasable and that the anionic anti-microbial agent is readily released upon the wipe being introduced into a water source to form an anionic disinfectant solution, it is reasonable for one of ordinary skill in the wipe art to expect that the wipe of the prior art would behave in a substantially similar manner since the wipe of the prior art is substantially similar in structure and composition as the claimed invention. Additionally the claimed properties are deemed to be inherent to the structure in the prior art since the prior art

teaches an invention with a substantially similar structure and chemical composition (hydroentangled nonwoven wipe impregnated with an anionic binder and a dual quaternary ammonium agent) as the claimed invention. Products of identical structure and composition cannot have mutually exclusive properties. The burden is on the Applicants to prove otherwise.

Regarding claim 2, the prior art teaches that the fibrous nonwoven substrate is hydroentangled (Suskind, column 2 lines 10-24, column 3 lines 6-46).

Regarding claims 4, 5 and 12, Suskind teaches a nonwoven anti-microbial wipe comprising a fibrous nonwoven substrate coated with a non-ionic and anionic binder mixture and coated with an anionic anti-microbial agent, wherein the anionic anti-microbial agent is a quaternary ammonium anti-microbial agent (see entire document including column 1 line 6 to column 5 line 37). As set forth above, it is unclear what the scope of an anionic quaternary ammonium anti-microbial agent necessarily entails. Additionally, it would have been obvious to one of ordinary skill in the wipe art at the time the invention was made to apply the binder mixture to the substrate and subsequently coating the substrate with an anionic anti-microbial agent, as the prior art suggests that the anti-microbial agent can be applied subsequent to application of the binder, based on processing conditions and the intended application.

Additionally, it should be noted that the limitation requiring the substrate to be coated with the binder mixture and subsequently coated with an anionic anti-microbial agent is a product-by-process limitation. Absent a showing to the contrary, it is Examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on

its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. The burden has been shifted to Applicants to show unobvious difference between the claimed product and the prior art product. The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if Applicants intend to rely on Examples in the specification or in a submitted declaration to show unobviousness, Applicants should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

Regarding claims 4, 5 and 12, the prior art does not appear to teach that the anionic anti-microbial agent is a dual quaternary ammonia anti-microbial agent. However, Martin teaches that it was known in the wipe art to form a wipe comprising a disinfection solution, wherein the disinfection solution contains a dual quaternary ammonium compound (Martin, column 1 line 13 to column 2 line 10, column 2 line 46 to column 4 line 45). Martin teaches that dual quaternary ammonium compounds are improvements over quaternary ammonium compounds, since quaternary ammonium compounds are not inhibitory to tuberculoïdal or sporicidal organisms. Martin teaches that the dual quaternary ammonium compound of Martin has improved efficacy, reduced toxicity, an increased spectrum of anti-microbial effectiveness, and gives a faster biocidal kill, is non-sensitizing, less irritating and is non-staining.

When a work is available in one field, design incentives and other market forces can prompt variations of it, either in the same field or in another. If a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so, §103 likely bars

its patentability. Moreover, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill.

One of ordinary skill in the art at the time the invention was made, when viewing the state of the art and the predictable improvements in structures known in the art, would be motivated to improve the anti-microbial wipe of the prior art, with the anti-microbial taught by Martin, since the improvements of Martin were known to one of ordinary skill in the art and it would have predictably improved similar articles in the same way. In the present case, it would have been obvious to one of ordinary skill in the wipe art at the time the invention was made to form the wipe of the prior art, wherein the anti-microbial agent is a dual quaternary ammonium anti-microbial agent, as taught by Martin, motivated by the desire of forming a conventional wipe with an improved anti-microbial agent known in the wipe art as predictably having improved efficacy, reduced toxicity, an increased spectrum of anti-microbial effectiveness, and gives a faster biocidal kill, is non-sensitizing, less irritating and is non-staining.

Regarding claims 4, 5 and 12, although the prior art does not appear to specifically teach that the anionic anti-microbial agent is readily releasable and that the anionic anti-microbial agent is readily released upon the wipe being introduced into a water source to form an anionic disinfectant solution, it is reasonable for one of ordinary skill in the wipe art to expect that the wipe of the prior art would behave in a substantially similar manner since the wipe of the prior art is substantially similar in structure and composition as the claimed invention. Additionally the claimed properties are deemed to be inherent to the structure in the prior art since the prior art teaches an invention with a substantially similar structure and chemical composition

(hydroentangled nonwoven wipe coated with the claimed binder mixture and a dual quaternary ammonium agent) as the claimed invention. Products of identical structure and composition cannot have mutually exclusive properties. The burden is on the Applicants to prove otherwise.

Regarding claim 5, the prior art teaches that the wipe is a laminate (Suskind, column 3 lines 6-46).

Regarding claim 6, the prior art teaches that the anti-microbial wipe is a hard surface wipe (Martin, column 1 line 6 to column 5 line 37).

Regarding claim 12, the anionic anti-microbial agent is a dual quaternary ammonia anti-microbial agent (Martin, column 1 line 13 to column 2 line 10, column 2 line 46 to column 4 line 45). As set forth above, it is unclear what the scope of an anionic quaternary ammonia anti-microbial agent necessarily entails.

Regarding claims 17, 20 and 22-24, Suskind teaches a nonwoven anti-microbial wipe comprising a fibrous nonwoven substrate impregnated with an anionic binder and an anionic anti-microbial agent, wherein the anionic anti-microbial agent is a quaternary ammonium anti-microbial agent (see entire document including column 1 line 6 to column 5 line 37). As set forth above, it is unclear what the scope of an anionic quaternary ammonia anti-microbial agent necessarily entails.

Regarding claims 17, 20 and 22-24, the prior art does not appear to teach that the anionic anti-microbial agent is a dual quaternary ammonia anti-microbial agent. However, Martin teaches that it was known in the wipe art to form a wipe comprising a disinfection solution, wherein the disinfection solution contains a dual quaternary ammonium compound (Martin, column 1 line 13 to column 2 line 10, column 2 line 46 to column 4 line 45). Martin teaches that

dual quaternary ammonium compounds are improvements over quaternary ammonium compounds, since quaternary ammonium compounds are not inhibitory to tuberculous or sporocidal organisms. Martin teaches that the dual quaternary ammonium compound of Martin has improved efficacy, reduced toxicity, an increased spectrum of anti-microbial effectiveness, and gives a faster biocidal kill, is non-sensitizing, less irritating and is non-staining.

When a work is available in one field, design incentives and other market forces can prompt variations of it, either in the same field or in another. If a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so, §103 likely bars its patentability. Moreover, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill.

One of ordinary skill in the art at the time the invention was made, when viewing the state of the art and the predictable improvements in structures known in the art, would be motivated to improve the anti-microbial wipe of the prior art, with the anti-microbial taught by Martin, since the improvements of Martin were known to one of ordinary skill in the art and it would have predictably improved similar articles in the same way. In the present case, it would have been obvious to one of ordinary skill in the wipe art at the time the invention was made to form the wipe of the prior art, wherein the anti-microbial agent is a dual quaternary ammonium anti-microbial agent, as taught by Martin, motivated by the desire of forming a conventional wipe with an improved anti-microbial agent known in the wipe art as predictably having improved efficacy, reduced toxicity, an increased spectrum of anti-microbial effectiveness, and gives a faster biocidal kill, is non-sensitizing, less irritating and is non-staining.

Regarding claims 17, 20 and 22-24, although the prior art does not appear to specifically teach that the anionic anti-microbial agent is readily releasable and that the anionic anti-microbial agent is readily released upon the wipe being introduced into a water source to form an anionic disinfectant solution, it is reasonable for one of ordinary skill in the wipe art to expect that the wipe of the prior art would behave in a substantially similar manner since the wipe of the prior art is substantially similar in structure and composition as the claimed invention. Additionally the claimed properties are deemed to be inherent to the structure in the prior art since the prior art teaches an invention with a substantially similar structure and chemical composition (hydroentangled nonwoven wipe impregnated with an anionic binder and a dual quaternary ammonium agent) as the claimed invention. Products of identical structure and composition cannot have mutually exclusive properties. The burden is on the Applicants to prove otherwise.

Regarding claim 20, the prior art teaches that the wipe is a laminate (Suskind, column 3 lines 6-46).

Regarding claim 22, the prior art teaches that the fibrous nonwoven substrate is hydroentangled (Suskind, column 2 lines 10-24, column 3 lines 6-46).

Regarding claim 23, the prior art teaches that the fibrous nonwoven substrate is selected from the group consisting of hydroentangled, airlaid and spunbond (Suskind, column 2 lines 10-24, column 3 lines 6-46).

Regarding claim 24, the prior art teaches that the readily releasable anionic anti-microbial agent consists of the dual quaternary anti-microbial agent (Martin, column 1 line 13 to column 2

line 10, column 2 line 46 to column 4 line 45). As set forth above, it is unclear what the scope of an anionic quaternary ammonia anti-microbial agent necessarily entails.

8. Claims 10, 11, 15, 16, 18, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suskind in view of Martin, as applied to claims 1, 2, 4-6, 12, 17, 20 and 22-24 above, and further in view of USPN 4,931,355 to Radwanski.

Regarding claims 10, 11, 15, 16, 18, and 19, the prior art teaches that the fibrous nonwoven substrate comprises a nonwoven web. The prior art does not appear to teach that the substrates comprise staple length fibers or continuous filaments. Since the prior art is silent as to the length of the fibers, it would have been necessary and therefore obvious to look to the prior art for conventional fiber lengths in wipes. Radwanski is classified in the same field in the art as Suskind, and provides this conventional teaching showing that it is known in the wipe art to form a hydroentangled nonwoven fibrous web comprising at least one of staple fibers and continuous filaments (Radwanski, column 1 line 9 column 4 line 44, column 5 lines 3-65, column 6 lines 66-68, column 7 lines 1-38, column 8 line 40 to column 9 line 9). It would have been obvious to one of ordinary skill in the wipe art at the time the invention was made to form the wipe of the prior art, with the fibers or filaments, as taught by Radwanski, as Suskind and Radwanski are classified in the same field in the art, and motivated by the desire of forming a conventional wipe with fibers or filaments known in the art to be predictably suitable for use in wipes, and since it is within the level of ordinary skill in the art to choose with a reasonable expectation of success staple fibers and/or continuous filaments, since the nonwoven is predictably formed from a finite number of possible fiber lengths, such as staple fibers and/or continuous filaments.

Regarding claim 21, the prior art does not appear to teach that the wipe further comprises a scrim reducing extensibility of the fibrous nonwoven substrate. However, Radwanski is classified in the same field in the art as Suskind, and teaches that it is known in the wipe art to form a hydroentangled nonwoven fibrous web comprising at least one of staple fibers and continuous filaments, and a scrim reinforcing material (Radwanski, column 1 line 9 column 4 line 44, column 5 lines 3-65, column 6 lines 66-68, column 7 lines 1-38, column 8 line 40 to column 9 line 9). Radwanski teaches that the reinforcing material strengthens the wipe, in addition to controlling the fluid distribution, wetness control, absorbency, printability, filtration, and weight of the wipe. It would have been obvious to one of ordinary skill in the wipe art at the time the invention was made to form the wipe of the prior art, additionally comprising a scrim, as taught by Radwanski, as Suskind and Radwanski are classified in the same field in the art, and motivated by the desire of forming a conventional wipe with reinforcing material which strengthens the wipe, in addition to controlling the fluid distribution, wetness control, absorbency, printability, filtration, and weight of the wipe. Additionally, although the prior art does not specifically teach that the scrim reduces extensibility of the fibrous nonwoven substrate, it is reasonable for one of ordinary skill in the art to expect that the scrim would behave in a substantially similar manner as the claimed scrim, since the prior art teaches a substantially similar scrim as the claimed invention.

Response to Arguments

9. Applicants' arguments with respect to claims 1, 2, 4-6, 10-12, and 15-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER Y. CHOI whose telephone number is (571)272-6730. The examiner can normally be reached on Monday - Friday, 08:00 - 15:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter Y Choi/
Examiner, Art Unit 1794

/Andrew T Piziali/
Primary Examiner, Art Unit 1794